

Ambassador Bleich's Remarks for Discussion and Q&A with Goulburn Students School Hall, Trinity College, Goulburn

(*As prepared – June 18, 2013*)

I'm delighted to welcome everyone here today.

Thank you to our co-hosts from ACT Basketball, especially Tony Jackson and Megan Salic. I'm particularly pleased that my fellow American, Camantae Griffin, from the Gunners has joined us, as well as (hopefully) future LSU player Darcy Malone. Darcy, I'm looking forward to seeing you Finally, thanks to Pat McNeil from Public Affairs at the U.S. Embassy for helping get this event off the ground. If there is a ball or a puck involved, Pat is there.

Thanks to Mayor Geoffrey Kettle and Acting Principal (of Trinity College) Mark Bourke.

I'm really pleased to be here with you today.

The U.S.-Australia relationship is like no other in the world in terms of closeness and trust. Granted, we have what we call a "special relationship" with the United Kingdom, but we had to fight a war with them to get our independence, so things were a little tense for a while. Apparently they weren't too thrilled when we decided we didn't want to be a colony any more.

It was kind of like having a bad breakup – they seemed to take it ok at first, but then they came back years later and burned a bunch of our stuff, like Washington, DC, and the White House. That was kind of awkward for everyone.

Australia is more like the best friend we've had for years. We've been through a lot together, we understand each other's jokes, and we both have complicated pasts with the UK. Of course, you guys play football all wrong. But then we don't understand the importance of Vegemite to a balanced diet, so I guess it all evens out. Luckily, friends can overlook those sorts of things. In our case, everything we've been through together has just made our alliance stronger.

Partnerships between countries are kind of like marriages. You have to work hard at them every day. If you don't, they fail. You can't take your partner for granted. There's a lot of give and take involved. Most importantly, relationships evolve over time and we need to keep pace.



Our relationship with Australia has changed with every generation. Our grandparents – for some of you it might be great-grandparents – fought side by side during one of the most devastating wars this world has ever seen. They fought together to prevent invasion and to protect the freedoms that we still enjoy today. Through that cooperation, we forged a durable security alliance that is still going strong today.

For example, we have a group of Marines training with the Australian Defence Forces up in Darwin. They are working hard to learn about Aussie culture. I hear they're learning to play Aussie rules football. When a Marine says a sport is tough, you KNOW it's hard. No word yet on whether they are learning to like Vegemite.

Your parents worked hard to build on the foundation established by their parents. Together, we have developed a solid economic relationship that allows us to prosper side by side. The United States is the biggest investor in Australia, and Australians invest heavily in the United States. We regularly visit each other's countries. We exchange books, music, movies, and TV shows. In short, we are more connected than ever.

While previous generations worked to build our alliance the old-fashioned way – there was no Google, no Facebook, no Internet, and very few computers – you have better, faster options. All of this new technology means that communication now happens almost at the speed of thought. You can talk almost instantly with someone half a world away – or even across the vast distances of the solar system. Information, people, and ideas travel much more quickly and it is easier than ever before to work together.

You will be the people – along with my children and other American teenagers – who will decide where we go from here. You will be the ones who decide how we will build upon our existing partnership in the future.

Today, I'm going to talk to you about some of the challenges I think we'll face together in the years ahead. The number of people in the world is increasing steadily. We will need to think about how we will provide food, water, and energy for everyone. We will also need to deal with the effects of climate change, which can make the environment less hospitable and more dangerous. Finally, we will continue to pursue our dreams of voyaging to new planets and making discoveries in the farthest reaches of space.

Food, Water, and Energy

So let's start with food, water, and energy. Generally speaking, we like all of these things. We like them a lot. And that can lead to problems.



Our ability to produce and provide enough water, food, and energy to meet the demands of a rapidly growing industrialized world is in doubt. If we make the wrong choices – or make no choices – there is a good chance that we will face a future clouded by riots, mass migration, environmental destruction, and regional instability.

The challenge comes in part from the dynamic growth in the Asia-Pacific. About half of the people in the world live in this region. The world's population has nearly tripled since 1950 – from 2.5 billion to nearly 7 billion today. Another 2 billion people will join us by 2050. A lot of that growth will be in countries around the Indian and Pacific Oceans.

More important than the dramatic increase in numbers is how these people will live. As economies improve, incomes will improve as well. People will want the same things we all want – nicer homes, cars, and electronics. They will demand more energy per person; they will consume more water per person; and they will want more and better food. Between population growth and rising incomes, the UN estimates that the demand for food, energy, and water will rise exponentially faster than the population.

Now, we can't stop this growth. And we shouldn't want to – when nations around us prosper, so do we. What we need to think about is how to help the world prepare for this dramatic shift.

It's unlikely that we'll face a catastrophe as long as we recognize and address the problems. But to feed, hydrate, and power everyone will require early and unprecedented investment. It will require new levels of cooperation. We will need to share ideas across borders beyond anything we have done before.

The challenge with food is this: there are only so many ways to increase agricultural production. We can devote more land to agriculture. We can increase yields. We can improve the efficiency of farming and food delivery through better technology. We can improve farming practices. Over the past 50 years, we've relied largely on the first two factors – more land and more fertilizers and pesticides. But there's only so much arable land, and there's only so much food that land will yield.

So we're going to need to make two significant changes. First, we'll need to work to change technologies and farming practices. We need to modernize every part of the food chain around the world to get more crops to market with less spoilage and more accountability.



Second, we'll need to promote more efficient food sources. As a devoted carnivore and lover of processed foods – particularly Big Macs – I don't take this lightly, but realize it must be done.

While we change how we think about food, we also need to change how we think about water. It is, in some ways, an even more pressing problem.

Already, more than a billion people lack adequate water. At current consumption rates, that number will triple in less than 15 years.

By 2025, nearly two-thirds of the world's population will be living under water-stressed conditions, including roughly two billion people who will face absolute water scarcity. Water scarcity and poor water quality increase disease, undermine economic growth, limit food production, and threaten peace and security.

By 2050, we will need nine more Murray Rivers at full annual flow just to meet the global water shortage. This is not only a problem on the world's driest continent, it is – or soon will be – a problem on every continent. And it is not news. We've seen it coming for years.

Almost everyone wastes water. In the U.S., water costs about \$1.50 for every 1,000 gallons. We think of it like we think of air – unlimited, virtually free, and available at the turn of a tap. If we want to make sure that we have enough water, we're going to have to get out of our comfortable habits and confront the real challenges of water scarcity – including changing how we produce, deliver, consume, and price water.

All over the world, divisive politics and bad policies have prevented the efficient and fair use of our most valuable natural resource. This is why former Secretary of State Hillary Clinton highlighted the importance of water security as a "global imperative."

Finally, there is the issue of establishing a secure energy future. Today, 23 percent of the world's population – more than 1.6 billion people – still lives without electricity. Overwhelmingly, they live in the least developed countries, and they will need electricity



to achieve sustainable economic development. In rapidly industrializing nations, demand for energy continues to increase.

The subject of how best to produce energy – or of what energy sources we should use – is always contentious. Everyone has their preferred fuel source and they don't want to hear about others, or about the problems with using their own. And so the debate too often stagnates.

But the following facts are true:

First, there is a finite amount of oil and gas in the ground and it is **becoming** increasingly expensive to produce the amount we need every year. All of our transportation systems – cars, trucks, airplanes, ships – run principally on oil products. This is unsustainable, and we need to develop alternatives. If we do not, the future will not be bright. While it's fun to watch Mad Max in the comfort of a climate controlled lounge, I don't think it would be nearly as much fun to experience it firsthand.

Second, being dependent on oil makes nations like ours vulnerable. Fossil fuels are unevenly distributed around the globe. To the extent that a nation can use energy sources that they already have – sources like wind, solar, hydro, and biofuels – rather than oil, the less vulnerable we are to the politics or pressures of oil-producing nations. Although the United States and Australia are getting better at tapping previously inaccessible supplies – the U.S. is poised to become the largest producer of oil in the world – we need to explore ways to become even more energy independent.

America and Australia consume more energy per capita than most other nations on earth. We built our economies to run on inexpensive fuel supplies that once seemed limitless. But we now have to confront the fact that in a carbon constrained world, we can't use them forever. So we need to begin developing alternatives — bridge technologies and long-term future technologies.



Third, our current energy supplies are hurting our health and environment compared to alternatives. Carbon is a big problem. But the risk comes from much more than excess carbon emissions, it also comes from other byproducts like sulfur dioxide, nitrogen dioxide, lead, soot, and other particulates. If you have seen pictures of Beijing or Mexico City, you've seen what can happen.

None of these changes will be easy, but over the course of human civilization we have faced a lot of big challenges. Societies have changed their energy sources many times in the past. There was a time when we sent ships across the world so that we could light our lamps with whale oil. That was not our best long term plan because we were exploiting a limited resource. Our economies – fortunately for the whales – evolved and survived. Throughout history, the economies that ultimately advanced were those that adapted best to the difficulties posed by supplying ample energy, food, and water.

So how do we make the necessary changes?

When I was younger, one of my mentors asked me: "How do you eat an elephant?" I didn't know. Elephants haven't really been an animal I've had much experience with. The answer: "One bite at a time." And it helps if you have a lot of people eating with you.

Solving these problems will take lots of small actions by lots of people. The challenge will be getting those of us in comfortable nations to take action when we have not been affected yet. The solutions are out there, and it will be people like you who will find them.

Climate Change



I've covered a lot of information so far, and some of you are probably wishing you were still in class, or taking a test, or something like that. So I'll make small talk for a little while so you can recover.

It used to be that in polite society the two topics you were supposed to avoid were politics and religion. This is why people used to talk about the weather.

Today, a good way to start a controversy is to talk about the weather: how it is changing and why it is changing. So for those of you who have delicate sensibilities, I'm very sorry but I plan to talk about the weather now.

The existence and causes of climate change are topics on which there is no shortage of opinions, conjecture, policies, fears, and accusations. While this is just as true in the United States as it is in other countries, I'd like to make sure there is no mistake about the U.S. government position on climate change:

Climate change is real.

It is influenced by human greenhouse gas emissions.

And it is among the most pressing challenges currently facing humanity.

Full stop.

But climate change is also part of the larger picture I just talked about. Regardless of how people respond to the science on global climate change, we would have to change our energy systems anyway.

Climate change means that some land previously used for growing crops may no longer be available due to more extreme weather conditions.

In addition, climate change will have a profound impact on the availability, distribution, and quality of water. It will tax infrastructure and natural systems for managing water resources.

Floods, droughts, and other extreme weather events are projected to become more frequent and severe in some regions, which will further stress our ability to manage our resources. We will see more hurricanes like Sandy – which hit New Jersey last year – and Katrina –which devastated New Orleans. We will see more floods, and more droughts.



Compared to many other nations, the U.S. and Australia are in a privileged position. We have had more warning, more options, and the ability to develop and use bridge technologies. We can anticipate and model the costs of shifting to new energy systems. In fact, academics are doing this, businesses are doing it, and even legislators are doing it.

Around the world, countries are beginning to agree that we need to change to a low carbon world. Nations are working to keep the global average temperature from rising more than two degrees Celsius. We are working to reduce emissions and to change the way we use energy.

I am happy to say that the United States is working to practice what we preach. We've raised our fuel efficiency standards on cars and appliances. We are promoting smart grids, smart meters, and other technologies to reduce waste and overconsumption. We've significantly changed the energy mix we use and have reduced our carbon emissions.

We're doing the same things here in Australia. Our Embassy here is the greenest in Australia. We use solar panels in our residences and we recently added a Chevy Volt electric car to our vehicle fleet. The new Public Affairs building at the Embassy has a green roof that helps keep it warmer in the winter and cooler in the summer using lessenergy.

So we're working hard to do our part.

Now, the negative effects of climate change aren't going to just go away. We face a tough, century-long effort. And that's where you come in. We're going to need both sustained commitment and new technological breakthroughs to make things better. It's going to be people like you – working with scientists around the world – who develop better energy sources, new technologies, and more efficient ways to use the resources we have.

From problems on the Earth, let me focus for a minute on the amazing opportunities we are working on together in space. Of all the ways in which we work together, this is probably one of my favorites.

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The United States and Australia have a long and storied history together in space.

In the 1950s, when we began our space cooperation, the United States had only one space tracking station in the Mojave Desert. We needed two more stations at equal distances around the globe to be able to track objects orbiting the planet. The South Australia station in Woomera was the first deep space station established outside the United States.

In 1964, at a station in Western Australia, Gerry O'Connor became the first Australian to chat with a space traveler. He spoke to a guy named John Glenn, aboard the Friendship 7. I'm not sure what Gerry said, but it was probably either "Howya goin', John" or "G'day, mate."

When a man first landed on the moon almost 44 years ago, it was Australian antennas outside Canberra that broadcast Neil Armstrong's first steps and his famous words – "One small step for man, one giant leap for mankind" – to the world.

More recently, Australian antennas were instrumental in ensuring the Curiosity rover's safe landing on Mars. When the event was broadcast last year, people everywhere were able to experience the excitement and joy of such an historic event firsthand. Since then, Curiosity has given us enormous amounts of valuable information about Mars. In its spare time, Curiosity likes to Tweet. I have to say, I'm a little jealous of how many followers it has on its Twitter feed.

Unfortunately, things in space need to be cleaned up as well. Satellites are essential in helping us communicate, monitoring the weather, and responding to disasters. They are in some respects the nervous system of both our civil and defense infrastructure and of global commerce. However, the orbit in which these satellites travel is getting more and more crowded. As more nations launch satellites, the potential for collisions increases. Some nations are testing anti-satellite weapons, scattering thousands of pieces of debris across an environment already crowded by more than 50 years of activity in space.

That is why we are working with Australia to protect our satellites from space junk. We are also working to promote responsible behavior so that all nations can peacefully share the benefits of near space.

We are on track to land people on Mars by 2035, and I have no doubt that Australians - I hope even some of you - will be with us every step of the way.

Conclusions



Americans and Australians are many things. Above all, however, we are problem-solvers. Our farmers and engineers are developing new approaches and new technologies that will help us meet the demands of a changing world. Our scientists are unlocking new sources of energy, including renewable energy. Our policymakers are developing local solutions and advancing international agreements. The problems we face are not insurmountable. But they will require the support of both our nations to bring about sustained, effective, and collective action.

As we go forward together into the future, I think it's important that we grow closer and more trusting rather than more suspicious and wary. It is important to keep the friends we have, but also to enlarge that circle by making new friends.

We need to become more connected, to make more treaties and more trade agreements. We need to ensure that our emergency services are placed where they can deal effectively with the devastating consequences of natural disasters. But we also need to build strong person-to-person ties at the grassroots level. This is one of the most important things we can do to foster peace and security.

I hope that, should you all return here for your 30th reunion, you will feel the same way I do about the U.S.-Australia relationship. I am incredibly proud to be a part of this great partnership with such a fantastic country.

Thank you. I look forward to your questions.